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## Staff Memorandum

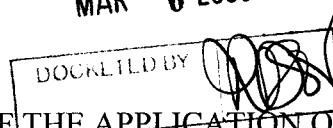
AZ CORP COMMISSION  
DOCKET CONTROL

To: THE COMMISSION <sup>Arizona Corporation Commission</sup>  
**DOCKETED** DOCKET NO. RR-03639A-07-0607

From: Safety Division

MAR 6 2008

Date: March 7, 2008



RE: IN THE MATTER OF THE APPLICATION OF THE UNION PACIFIC RAILROAD COMPANY TO ALTER ONE CROSSING OF THE UNION PACIFIC RAILROAD IN PINAL COUTNY, ARIZONA AT PICACHO BOULEVARD.

### Background

On October 19, 2007, the Union Pacific Railroad Company ("Railroad") filed with the Arizona Corporation Commission ("Commission") an application for approval for the Railroad to alter a crossing of the Railroad in Pinal County ("County"), Arizona by adding a second mainline track. The crossing is in Pinal County, Arizona at Picacho Boulevard, AAR/DOT 741-712-W. Commission Safety Division Staff ("Staff") issued data requests and those data requests and the Railroads responses (without attachments), are included as attachments to this memorandum.

Union Pacific's filing in this application requests approval for the Railroad to add a second main track, twenty feet from the center of the existing main track, as well as a new siding track on the north side of the existing mainline fifteen feet from the existing mainline. This application is part of the Railroad's double tracking effort for their Sunset Route across Arizona.

On February 28, 2007, Staff, the Railroad, and Pinal County participated in a diagnostic review of the proposed improvements at Picacho Boulevard. All parties present were in agreement to the proposed improvements at the previously mentioned crossing. The following is a break down of the crossing in this application, including information about the crossing that was provided to Staff by the Railroad and its contractors.

### Geographical Information

Picacho Boulevard is a paved road which begins at the Interstate 10 frontage road (Camino Adelante Road) on the east side of the Interstate (just

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south-east of Picacho, Arizona and just north-west of the exit for Picacho State Park). Picacho Boulevard, after crossing the UP tracks continues on a north-west trajectory parallel to the tracks through the town of Picacho, then turns north to end at Milligan Road which provides access to State Route 87.

### **Picacho Boulevard**

The proposed second main track at this crossing will be located south of the existing main track. The new siding will be on the north side of the existing main track. When construction is finished there will be three tracks through Picacho Boulevard. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new tracks. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates and bells as well as a new concrete crossing surface and replace any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data for Picacho Boulevard was provided to the Railroad by the HDR Engineering. Data provided shows the Average Daily Traffic (ADT) for 2007 to be 287 vpd. No future traffic projections were given. The current Level of Service ("LOS") for this two lane road is LOS A, for both north and south bound traffic.

**Note:** The American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 2004, states that the Level of Service characterizes the operating conditions on a facility in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. This is a measure of roadway congestion ranging from LOS A--least congested--to LOS F--most congested. LOS is one of the most common terms used to describe how "good" or how "bad" traffic is projected to be.

The posted speed limit on Picacho Boulevard is 40 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident on Picacho Boulevard on 8/5/2007, no injuries, or fatalities have occurred at this crossing.

Alternative routes from this crossing are as follows; to the west 2.39 miles to AZ 87 Hwy, and to the east 15.34 miles to Park Link Road.

The estimated cost of the proposed railroad crossing upgrade is \$295,980. The Railroad is paying for the entire cost of the crossing improvements, broken

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down by signal and crossing surface work, with the signal work costing \$265,100 and the crossing surface \$30,880.

### Train Data

Data provided by the railroad regarding train movements through this crossing are as follows:

**Train Count:** 48 total average trains per day (46 freight, and 2 passenger trains)

**Train Speed:** 79 mph passenger / 70 mph freight

**Thru Freight/Switching Moves:** All train movements through this crossing are thru movements with no switching operations, according to Union Pacific, Manager of Train Operations, Rob Henderson. This crossing is used by Amtrak twice per day, three times per week.

### Schools and Bus Routes

Information about schools, and school buses, in the area was provided by Jennifer Crumbliss and Juan Cruz of HDR Engineering. There are six schools in the area, they are; Santa Cruz High School in Eloy, Toltec Elementary School in Eloy, Toltec Middle School in Eloy, Youth Haven Desert Ranch in Picacho, Picacho Schools in Picacho, and Red Rock School in red Rock. The buses for all the schools combined, cross Picacho Boulevard about 11 times per day during the week.

Union Pacific also reports, that they are not aware of any public passenger buses that use the crossing in this application.

### Hazardous Materials

Staff asked the Union Pacific if they knew of any hazardous material traffic across these crossings, and this was their answer:

**Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.**

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### Hospitals

The nearest hospitals to this crossing are either Casa Grande Regional Hospital, approximately 20 miles west of Picacho Boulevard, or North West Medical Center in Marana, approximately 32 miles east of Picacho Boulevard. This crossing is not regularly used by emergency services personal.

### Zoning

Staff requested the Railroad provide information regarding the type of zoning in adjacent areas from the crossing. The following was their response:

*Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:*

*Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The observed land use from the field diagnostics are shown below:*

| <i>Crossing</i>     | <i>2007 Observed Land Use</i> |
|---------------------|-------------------------------|
| <i>Picacho Blvd</i> | <i>Rural Community</i>        |

*Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.*

### Spur Lines

Union Pacific indicated that in the past three years, no spur lines have been removed from within a 10 mile radius of the crossing in this application.

### Vehicular Delays at Crossings

Based on the current single track configuration, the railroad gave the following response about delay time for vehicles at the crossing in this application. The delay time is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

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**Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing.**

**Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:**

**Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at crossings involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at each of these crossings, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.**

**The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.**

**With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.**

**Source: Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110**

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Based on the railroads double tracking project, and the projected number of 84 trains per day through this crossing by the year 2016, the railroad gave this response as to what future delay times would be for vehicles at the crossings in this application.

**Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:**

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at crossings involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at this crossing in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

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**Source:** Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

**Grade Separation**

With regard to grade separating Picacho Blvd., the Railroad gave the following response:

*Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at this grade crossing. With that caveat, Union Pacific responds as follows:*

*In addition to the foregoing, grade separation is not appropriate for determination at this time because the local community and roadway authority have not finally determined whether a grade separation at this crossing is desired by that community and authority, what priority a grade separation would have with respect to other public projects, when construction of a grade separation could be begun and finished, and how a grade separation would be funded. Union Pacific is aware that the local community and roadway authority are studying these matters outside the context of Union Pacific's applications for grade crossing alterations. Furthermore, Union Pacific believes the crossing involved in this application is safe without constructing a grade separation. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.*

**Exposure Index**

Utilizing the Exposure Index (the product of daily road traffic and the daily number of trains as a simplified method or "quick check" to indicate the potential for a grade separation) described in the report Grade Separations – When Do We Separate? by Nicholson and Reed (this report was provided to Commissioner's Offices on June 22, 2007), Staff have determined the following for this crossing:

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| Street Name              | Year | Average Daily Traffic | Average Daily Trains | Exposure Index |
|--------------------------|------|-----------------------|----------------------|----------------|
| <b>Picacho Boulevard</b> | 2007 | 287                   | 48                   | 13,776         |
|                          | N/A  | N/A                   | 84                   |                |

The authors of the above-referenced report state that, "when a predetermined value of the index is reached, further investigation is triggered. Examples of predetermined values range in one state from 15,000 for rural conditions to 30,000 for urban conditions, in another from 50,000 for roads on the state highway system to 100,000 for all other roads, and in a third, by speed (15,000 for rural conditions where roadway vehicle speeds are greater than 50 MPH)." The report further indicates that, "investigation described in this section has shown this method is quick, easy, and sufficiently accurate to represent an adequate initial or general screening tool to be used prior to proceeding with more detailed technical analysis."

Having reviewed all applicable data, Staff supports the Railroads application. Staff believes that the upgrades are in the public interest and are reasonable. Therefore, Staff recommends approval of the Railroads application.

A handwritten signature in black ink, appearing to read "Dave Raber".

Dave Raber  
Director  
Safety Division

A handwritten signature in black ink, appearing to read "Brian H. Lehman".

Brian H. Lehman  
Railroad Supervisor  
Safety Division

ARIZONA CORPORATION COMMISSION  
UNION PACIFIC'S RESPONSES TO FIRST SET OF DATA REQUESTS  
DOCKET NO. RR-03639A-07-0607

Picacho Blvd in Pinal County, AZ, 2008 FEB 19 P 4: 46  
FEBRUARY 19, 2008

CW 1.1 Provide Average Daily Traffic Counts ("ADT") for each of the locations.

**Response:**

| Crossing     | Current ADT | Source                     |
|--------------|-------------|----------------------------|
| Picacho Blvd | 287         | 2007 Traffic Counts by HDR |

**Source:** 1) Jennifer Crumbliss, HDR Engineering, 8404 Indian Hills Drive, Omaha, NE 68114. (HDR Traffic Counts)

CW 1.2 Please describe the current Level of Service ("LOS") at each intersection.

**Response:** Union Pacific believes that the level of service analysis is concerned with mobility rather than safety. With that caveat, Union Pacific responds as follows:

| Crossing     | LOS                                    |
|--------------|--|
| Picacho Blvd | Northbound (LOS=A), Southbound (LOS=A) |

**Source:** Traffic level of service calculations were performed using Synchro and SimTraffic programs under the direction of Heidi Schneider with HDR Engineering, Inc at 5210 E Williams Circle, Suite 503, Tucson, AZ 85711, (520) 584-3600. The train delay times utilized in the analysis were provided by Tom Domres, with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110 via Union Pacific.

CW 1.3 Provide any traffic studies done by the road authorities for each area.

**Response:** 1) The 2007 Pinal County Comprehensive Plan on <http://www.co.pinal.az.us/PlanDev/PDCP/CPInfo.asp>  
2) 2006 Pinal County SATS (Small Area Transportation Study) on <http://www.co.pinal.az.us/PubWorks> under "Downloads"  
3) 2007 Final City of Casa Grande SATS on [http://www.ci.casa-grande.az.us/dev\\_center/development\\_center.php](http://www.ci.casa-grande.az.us/dev_center/development_center.php)

CW 1.4 Provide distances in miles to the next public crossing on either side of the proposed project location. Are any of these grade separations?

**Response:** *Union Pacific believes that the last question in CW 1.4 raises an issue that is irrelevant, namely, whether either of the next public crossings is a grade separation. With that caveat, Union Pacific responds as follows:*

| <i>Crossing</i>     | <i>TO THE WEST</i>             | <i>TO THE EAST</i>                   |
|---------------------|--------------------------------|--------------------------------------|
| <i>Picacho Blvd</i> | <i>2.39 miles to AZ 87 HWY</i> | <i>15.34 miles to Park Link Road</i> |

*AZ 87 Highway is grade separated.*

**Source:** *HDR's use of the Union Pacific Straight-line Diagrams and [www.MapQuest.com](http://www.MapQuest.com).*

CW 1.5 How and why was grade separation not decided on at this time? Please provide any studies that were done to support these answers.

**Response:** *Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at this grade crossing. With that caveat, Union Pacific responds as follows:*

*In addition to the foregoing, grade separation is not appropriate for determination at this time because the local community and roadway authority have not finally determined whether a grade separation at this crossing is desired by that community and authority, what priority a grade separation would have with respect to other public projects, when construction of a grade separation could be begun and finished, and how a grade separation would be funded. Union Pacific is aware that the local community and roadway authority are studying these matters outside the context of Union Pacific's applications for grade crossing alterations.*

*Furthermore, Union Pacific believes the crossing involved in this application is safe without constructing a grade separation. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.*

CW 1.6 If this crossing were to be grade separated, provide a cost estimate of the project.

**Response:** *Again, Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at this grade crossing. In addition, any attempt to estimate the cost to construct a grade separation would be speculative in the absence of a detailed study of the particular crossing in question. With those caveats, Union Pacific responds as follows:*

*In connection with its recent application to upgrade the crossing of Union Pacific tracks at the intersection of Power and Pecos Roads, RR-03639A-07-0398, the Town of Gilbert estimated that a grade separation at that location would cost \$22 million. Depending on the particular crossing involved, a reasonable range for the costs of constructing a grade separation would be between \$20 million and \$40 million.*

CW 1.7 Please describe what the surrounding areas are zoned for near this intersection. i.e. Are there going to be new housing developments, industrial parks, etc.?

**Response:** *Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:*

*Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The observed land use from the field diagnostics are shown below:*

| <i>Crossing</i>     | <i>2007 Observed Land Use</i> |
|---------------------|-------------------------------|
| <i>Picacho Blvd</i> | <i>Rural Community</i>        |

*Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.*

**Source:** *1) 2006 Pinal County SATS (Small Area Transportation Study) on <http://www.co.pinal.az.us/PubWorks> under "Downloads"*  
*2) The Central Arizona Association of Governments' Planning Department(CAAG) <http://www.caagcentral.org/GIS/gishome.html>*

CW 1.8 Please supply the following: number of daily train movements through the crossing, speed of the trains, and the type of movements being made (i.e. thru freight or switching). Is this a passenger train route?

**Response:**

**Train Count:** 48 total average trains per day (46 freight, 2 passenger)  
**Train Speed:** 79 mph passenger / 70 mph freight  
**Thru Freight/Switching Moves:** All moves through this crossing are thru freight. (According to MTO Rob Henderson there are no switching moves at this crossing.)

*This crossing is used by Amtrak twice per day, three times per week.*

**Source:** *Union Pacific's Manager of Train Operations, Rob Henderson.*

CW 1.9 Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

**Response:**

*There are several schools in Pinal County within the area of the crossing in this application.*

*Santa Cruz High School @ 900 N. Main Street, Eloy, AZ 85231  
Toltec Elementary School @ 3315 N Toltec Road, Eloy, AZ 85231  
Toltec Middle School @ 12115 W Benito Drive, Eloy, AZ 85223  
Youth Haven Desert Ranch @ 16848 S.Vail Road, Picacho, AZ 85241  
Picacho Schools (K-8) @ 17865 S. Vail Road, Picacho, AZ 85241  
Red Rock School @ 33655 W. Aguirre Lake, Red Rock, AZ 85245*

**Source:**

- 1) Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site [www.GoggleEarth.com](http://www.GoggleEarth.com) also,*
- 2) Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.*

CW 1.10 Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

**Response:** *The combined bus routes cross the Picacho Blvd at-grade crossing a total of 11 times per day during the week.*

- Source:**
- 1) *Jesse Rosel, Transportation Director for Santa Cruz High School located at 900 N. Main Street, Eloy, AZ 85231, (520) 466-2200*
  - 2) *Linda Lawson, Admin Assistant for Toltec Elementary School located at 3315 N Toltec Road, Eloy, AZ 85231, (850) 466-2360*
  - 3) *Marilyn Lyman, Office Manager for Youth Haven Desert Ranch located at 16848 S. Vail Road, Picacho, AZ 85241, (520) 466-3093*
  - 4) *Juan Castillo, Director of Plan Operations for Picacho Schools located at 17865 S. Vail Road, Picacho, AZ 85241, (520) 466-7942*
  - 5) *Jose Espinosa, Transportation Supervisor for Red Rock School located at 33655 W. Aguirre Lake, Red Rock, AZ 85245, (520) 682-3331*

CW 1.11 Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

**Response:** *The nearest hospital to these crossings is Casa Grande Regional Hospital (approximately 20 miles west of Picacho Blvd) and NW Medical Center in Marana (approximately 32 miles east of Picacho Blvd). To our knowledge, this crossing is not used extensively by emergency service vehicles.*

**Source:** *Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site [www.GoggleEarth.com](http://www.GoggleEarth.com) also, Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.*

CW 1.12 Please provide the total cost of improvements to each crossing.

**Response:**

| <i>Crossing</i>     | <i>Crossing Surface</i> | <i>Signal</i>       | <i>Total</i>        |
|---------------------|-------------------------|---------------------|---------------------|
| <i>Picacho Blvd</i> | <i>\$ 30,880.00</i>     | <i>\$265,100.00</i> | <i>\$295,980.00</i> |

**Source:** *Union Pacific's Engineering.*

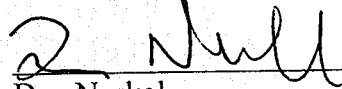
ORIGINAL AND THIRTEEN COPIES  
of the foregoing filed this 19<sup>th</sup> day of  
February, 2008, with:

Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

COPY of the foregoing hand-delivered  
this 19<sup>th</sup> day of  
February, 2008, to:

Mr. David Raber  
Mr. Brian Lehman  
Mr. Chris Watson  
Railroad Safety Section  
Arizona Corporation Commission  
2200 North Central Avenue, #300  
Phoenix, Arizona 85004

Janice M. Alward, Esq.  
Charles H. Hains, Esq.  
Legal Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

  
\_\_\_\_\_  
Dan Norkol

**ARIZONA CORPORATION COMMISSION  
UNION PACIFIC'S RESPONSES TO SECOND SET OF DATA REQUESTS  
DOCKET NO. RR-03639A-07-0607  
Picacho Blvd. in Pinal County, AZ  
FEBRUARY 29, 2008**

CW 2.1 Based on the current single track configuration at the crossing[] specified by this application, please provide the current traffic blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

***Response:*** Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at this crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating

practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

*Source:* Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

CW 2.2 Based on anticipated double tracking at the crossings covered by this application and projected train traffic of 84 trains per day by 2016, please provide the projected (2016) blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

*Response:* Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at this crossing in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be

stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

**Source:** Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

CW 2.3 Please provide the posted vehicular speed limit for the roads intersecting each crossing covered in this application.

**Response:**

| Crossing      | Posted Vehicular Speed Limit |
|---------------|------------------------------|
| Picacho Blvd. | 35 mph                       |

**Source:** Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114

CW 2.4 Please provide information as to whether passenger buses (other than school buses) utilize this crossing and the number of times a day a passenger bus crosses.

**Response:** Union Pacific does not have access to such information, but instead must rely on information provided by others. With that caveat, Union Pacific responds that it is not aware of any public passenger buses that utilize the crossing involved in this application.

**Source:**

- 1) Christine McMurdy, Public Works Department, City of Goodyear, 190 N. Litchfield Road, Goodyear, AZ 85338, (623) 932-1637
- 2) Karen Thomas, GIS Department, City of Maricopa, 45145 W. Madison Avenue, P.O. Box 610, Maricopa, AZ 85239, (520) 568-9098
- 3) Aaron Cart, GIS Department, City of Casa Grande, 510 E. Florence Blvd., Casa Grande, AZ 85222, (520) 421-8625
- 4) Belinda Cota, Planning Department, City of Eloy, 628 N. Main Street, Eloy, AZ 85231, (520) 466-2578

CW 2.5 Please provide information as to whether vehicles carrying hazardous materials utilize this crossing and the number of times a day a vehicle carrying hazardous materials crosses.

**Response:** Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.

CW 2.6 Please indicate whether any spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application. Please include the reason for the removal, date of the removal and whether an at-grade crossing or crossings were removed in order to remove the spur line.

**Response:** Using the definition of a "spur line" or "spur track" as "a stub track of indefinite length diverging from a main track or other track," ACC Regulation R14-5-101(20), no spur lines have been removed within the last three years inside a 10-mile radius of the crossing covered in this application.

CW 2.7 Please indicate which, if any, spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application were done at the direction or request of (1) the relevant road authority, (2) the industry served by the spur line, or (3) by the railroad.

**Response:** Not applicable. See Response to CW 2.6.

ORIGINAL AND THIRTEEN COPIES  
of the foregoing filed this 29th day of  
February, 2008, with:

Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

PINAL COUNTY  
BOARD OF SUPERVISORS

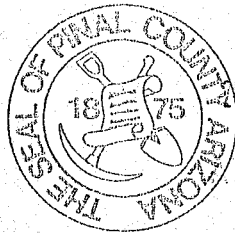
CHRIS WATSON

LIONEL D. RUIZ, District 1  
Mammoth

SANDIE SMITH, District 2  
Apache Junction

DAVID SNIDER, District 3  
Casa Grande

January 9, 2008



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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

TERRY DOOLITTLE  
County Manager

Mr. David Raber  
Director, Safety Division  
Arizona Corporation Commission  
2200 North Central Avenue  
Suite 300  
Phoenix, Arizona 85004

RR 03639A-07-0607

Re: Support for Union Pacific Railroad Company's Double-Track Project

Dear Mr. Raber:

This letter will serve to inform you that Pinal County fully supports Union Pacific Railroad Company's project to construct a second main line railroad track through Pinal County and the State of Arizona, known as "Union Pacific's Double-Track Project." Specifically, Pinal County fully supports and approves, and will to cooperate with Union Pacific concerning, construction of one additional main track over and across public roadway crossings of the Union Pacific Railroad tracks at grade within Pinal County, as listed on Exhibit A attached hereto. Pinal County therefore requests that the Arizona Corporation Commission approve each application filed by Union Pacific for authority to install a second main line railroad track at grade at those crossings listed on Exhibit A.

If it would be helpful to the Commission or its Staff, Pinal County would be pleased to have its representative appear at any hearings or meetings concerning Union Pacific's crossing alteration applications to the Commission to confirm the County's support and approval of those applications. If you have any questions or wish to discuss the County's position with respect to these matters, please do not hesitate to contact me.

Sincerely,

David Snider, Chairman

c: Board of Supervisors  
Ken Buchanan, Assistant County Manager  
for Development Services  
Chief Civil Deputy County Attorney, Chris Roll